REMARKS

Applicants have amended the claims to more particularly define the invention and to clearly define the subject matter over the prior art. Claims 15 and 17-24 have been canceled from the application without prejudice or disclaimer in an effort to expedite early allowance of the application by reducing the outstanding issues. The cancellation of these claims from the application at this time obviates the rejections of these claims for the reasons set forth in paragraphs 7-10, pages 6-12, of the Official Action. Applicants reserve all rights to re-introducing this subject matter in the present application or a further continuing application.

The Examiner is thanked for the reconsideration of the restriction and election requirements, both of which have been withdrawn.

Applicants have added claims new claims 25-32 to the application as fully supported by the specification as originally filed. These added claims are direct to further aspects of the invention and include the subject matter from earlier canceled claim 7. In addition, "consisting essentially of " is included claim 30 to more particularly define the claimed subject matter. Applicants most respectfully submit that all of the claims now present in the application are in full compliance with 35 U.S.C. 112 and are clearly patentable over the references of record.

First of all, Applicants would like to explain that the claimed "*mixture of isolated or synthetic unlabeled affinity molecules in a liquid carrier comprising at least two different affinity molecules, each with affinity for a predetermined analyte*", **is not** a sample solution on which a measurement/detection of a possibly present analyte is performed.

To facilitate understanding of the invention, claim 1 can be exemplified so that the affinity molecules are stated as antibodies and a predetermined analyte is stated as a predetermined analyte antigen, i.e. claim 1 should be understood to include: *"mixture of isolated or synthetic unlabeled antibodies in a liquid carrier comprising at least two different antibodies, each with affinity for a predetermined analyte antigen."* This has been made explicit in new claim 25.

The mixture of at least two different antibodies according to the invention is for use in a single or multi flow cell piezoelectric crystal micro balance apparatus. When introduced to the apparatus the antibodies of the mixture form immunocomplex-coated surfaces on the flow cells together with at least two different antigen-analogues attached to or coated on, i.e., immobilized on an electrode in one cell or separate electrodes in separate cells of the piezoelectric crystal microbalance apparatus.

Examples of use of the mixture of the invention is now described. The immunocomplex-coated piezoelectric crystal microbalance flow cells are used as ***antibody-activated*** flow cells in a sensor system using displacement mode for detection of at least two different analytes, i. e. predetermined antigens to be detected, in a fluid sample, that is, a test solution. This subsequent analysis is exemplified as the displacement mode concept in the specification of the present application, e.g. page 3, lines 11 – 20.

However, when predetermined amounts of the specific antibodies are used for the antibody- immobilized antigen-analogue complexes and a first measurement value is taken, then introduction of a test solution which has been pre-treated with the same amount of the specific antibodies will have both free antigens as well as antigen-antibody complexes in the solution in case the antigens in question are present in the test solution, and a second measurement value, compared to the first measurement value, will indicate the test result. This subsequent analysis mode is exemplified as the competition mode concept in the PCT specification e.g. page 3, lines 6 -10 and line 33

– page 4, line 4.

To avoid confusion with references disclosing different analysis methods, Applicants have temporarily withdrawn the newly introduced claims 17 – 24 for the time being, and Applicants have rejoin the original claim 7 exemplifying different explosives as analyte antigens as previously noted. Please note that Applicants have shown in the examples that a mixture of antibodies directed to different narcotics as well as an antibody directed to an explosive can be used for analysis purposes. Such a mixture is particularly useful in the surface activation of an analysis instrument in customs to detect both narcotics and explosives in passing subjects and items and has been made the subject of new claims 31 and 32 as fully supported by the specification as it would be interpreted by one of ordinary skill in the art. Applicants most respectfully submit that all of the claims now present in the application are in full compliance with 35 USC 112 and are clearly patentable over the references of record.

The rejection of 1-3, 5 and 16 as anticipated by the "Myerholtz" reference under 35 U.S.C. 102(b) has been carefully considered but is most respectfully traversed. Applicants most respectfully submit that "Myerholtz" does not disclose a mixture of isolated or synthetic unlabeled affinity molecules in a liquid carrier comprising at least two different affinity molecules, each with affinity for a predetermined analyte. This is especially true for the more specific claims defining the analytes as a mixture of narcotics and explosives which are not suggested in Myerholtz, see the discussion therein of the utility of the invention as set forth in the paragraph bridging columns 15 and 16 of the patent.

The Examiner states that Myerholtz teaches a measurement system comprising single or multiple analytes for use in a piezoelectric surface wave device, the device comprising immobilized receptor binding members specific for the analytes. Further, the Examiner states that "In this context, the "multiple" analytes is considered to mean distinct analytes." The Examiner finds that Myerholtz further teaches that the analytes

can be administered with "competing" receptor binding members for competition assay. The cited passage, column 9, lines 10-16 does not indicate that it would be possible to have several "competing" receptor binding members in one single mixture. The statement is in plural, i.e. the sample**s** may be augmented with appropriate competing receptor binding member**s** if the detection of the analyte is based on competition of the analyte for binding to the receptor. So, here is indicated only detection of one analyte binding to one receptor in one sample at a time. Accordingly, it is most respectfully requested that this rejection be withdrawn.

Further, Applicants most respectfully submit that they do not claim at least two analytes together with receptor binding members in one liquid carrier, Applicants claim a mixture of at least two isolated or synthetic different affinity molecules, e g antibodies, each with affinity for a predetermined analyte, e.g. antigen. In the claimed mixture of isolated or synthetic unlabelled affinity molecules in a liquid carrier there are **no analytes**. The possible analytes are present in a test sample that is subsequently introduced into a single or multi flow cell piezoelectric crystal micro balance apparatus which has sensing surfaces with analyte analogs that bind to the same affinity molecules as the respective analyte. Even though analytes are affinity molecules, they are not first isolated or synthesized and then mixed in a liquid carrier. Should this be the case there would be no point in analyzing such a mixture. Applicants do not agree with the Examiner that Myerholtz would teach the currently claimed mixture. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejection of claim 4 under 35 U.S.C. 103(a) as being unpatentable over Myerholtz in view of Badley et al has been carefully considered but is most respectfully traversed for the reasons discussed above. The Badley et al reference is cited to show concentrations but this teaching does not overcome the deficiencies of the primary reference as discussed above. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejection of claim 6 under 35 U.S.C. 103(a) as being unpatentable over Myerholtz in view of Strahilevitz has been carefully considered but is most respectfully traversed for the above reasons with respect to the Myerholtz reference. The teachings of the Myerholtz reference does not overcome the deficiencies of the primary reference as discoursed above. Accordingly, it is most respectfully requested that this rejection be withdrawn.

In view of the above comments and further amendments to the claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,

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